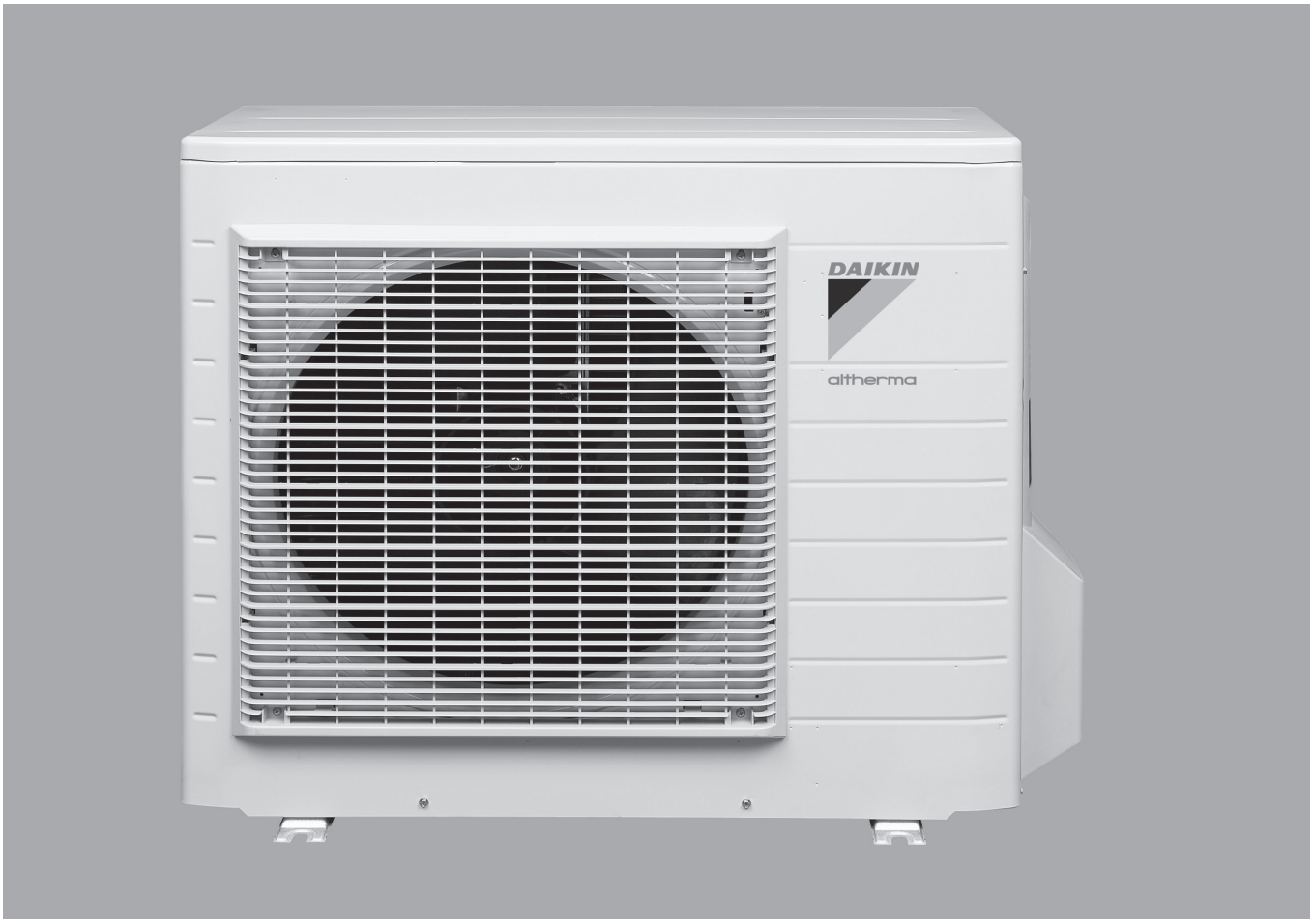
1 Features

- Single phase outdoor unit
- Cost effective alternative to a fossil fuel boiler
- Low energy bills and low CO2 emissions
- Easy to install
- Total solution for year round comfort



2 Specifications

2-1 NOMINAL CAPACITY AND NOMINAL INPUT				ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
For combination indoor units + outdoor units	Indoor Units			EKHBH016BA	EKHBH016BA	EKHBH016BA	EKHBH008BA	EKHBH008BA	EKHBH008BA
Condition 1	Heating capacity	Minimum	kW				4.36	4.36	4.36
		Nominal	kW	11.2	14.0	16.0	5.75	6.84	8.43
		Maximum	kW				7.45	8.79	9.58
	Heating PI	Nominal	kW	2.46	3.17	3.83	1.26	1.58	2.08
	COP	Nominal		4.55	4.42	4.18	4.56	4.34	4.05
Nominal Capacity	Heating capacity	Minimum	kW				3.87	3.87	3.87
		Nominal	kW	10.3	13.1	15.2	5.03	6.10	7.64
		Maximum	kW				6.68	7.98	8.76
	Heating PI	Nominal	kW	3.06	3.88	4.66	1.58	1.95	2.54
	COP	Nominal		3.37	3.38	3.26	3.18	3.13	3.00
For combination indoor units + outdoor units	Indoor Units			EKHBX016BA	EKHBX016BA	EKHBX016BA	EKHBX008BA	EKHBX008BA	EKHBX008BA
Condition 1	Heating capacity	Minimum	kW				4.36	4.36	4.36
		Nominal	kW	11.2	14.0	16.0	5.75	6.84	8.43
		Maximum	kW				7.45	8.79	9.58
	Cooling capacity	Minimum	kW				4.82	4.82	4.82
		Nominal	kW	13.9	17.3	17.8	7.20	8.16	8.37
		Maximum	kW				7.20	8.50	8.91
	Heating PI	Nominal	kW	2.46	3.17	3.83	1.26	1.58	2.08
	Cooling PI	Nominal	kW	3.79	5.78	6.77	2.27	2.78	2.97
	COP	Nominal		4.55	4.42	4.18	4.56	4.34	4.05
	EER	Nominal		3.67	2.99	2.63	3.17	2.94	2.82
Nominal Capacity	Heating capacity	Minimum	kW				3.87	3.87	3.87
		Nominal	kW	10.3	13.1	15.2	5.03	6.10	7.64
		Maximum	kW				6.68	7.98	8.76
	Cooling capacity	Minimum	kW				3.67	3.67	3.67
		Nominal	kW	10.0	12.5	13.1	5.12	5.86	6.08
		Maximum	kW				5.12	6.13	7.10
	Heating PI	Nominal	kW	3.06	3.88	4.66	1.58	1.95	2.54
	Cooling PI	Nominal	kW	3.60	5.29	5.95	2.16	2.59	2.75
	COP	Nominal		3.37	3.38	3.26	3.18	3.13	3.00
	EER	Nominal		2.78	2.36	2.20	2.37	2.26	2.21
Notes				Condition 1: cooling Ta 35°C - LWE 18°C - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)	Condition 1: cooling Ta 35°C - LWE 18°C - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)	Condition 1: cooling Ta 35°C - LWE 18°C - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)	Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)	Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)	Condition 1: cooling Ta 35°C - LWE 18°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 35°C (DT = 5°C)
				Condition 2: cooling Ta 35°C - LWE 7°C (DT = 5°C) - heating Ta DB/WB 7°C/6°C - LWC 45°C (DT = 5°C)					

2-2 TECHNICAL SPECIFICATIONS				ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
Casing	Colour			Ivory white					
	Material			Painted galvanised steel plate	Painted galvanised steel plate	Painted galvanised steel plate	Polyester painted galvanised steel	Polyester painted galvanised steel	Polyester painted galvanised steel
Dimensions	Unit	Height	mm	1,170	1,170	1,170	735	735	735
		Width	mm	900	900	900	825	825	825
		Depth	mm	320	320	320	300	300	300
	Packing	Height	mm	1,349	1,349	1,349	797	797	797
		Width	mm	980	980	980	960	960	960
		Depth	mm	420	420	420	390	390	390

2 Specifications

2-2 TECHNICAL SPECIFICATIONS				ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
Weight	Unit		kg	103	103	103	56	56	56
	Packed Unit		kg	114	114	114	61	61	61
Packing	Material			EPS					
				Carton					
				Wood	Wood	Wood			
				PP (Straps)	PP (Straps)	PP (Straps)			
	Weight		kg	11	11	11	5	5	5
Heat Exchanger	Dimensions	Length	mm	857	857	857	845	845	845
		Nr of Rows		2	2	2	2	2	2
		Fin Pitch	mm	1.4	1.4	1.4	1.8	1.8	1.8
		Nr of Passes		6	6	6			
		Face Area	m²	0.98	0.98	0.98			
		Nr of Stages		52	52	52	32	32	32
	Tube type			Hi-XSS(8)	Hi-XSS(8)	Hi-XSS(8)	Hi-Xa(8)	Hi-Xa(8)	Hi-Xa(8)
	Fin	Type		WF fin					
		Treatment		Anti-corrosion treatment (PE)					
Fan	Type			Propeller					
	Quantity			2	2	2	1	1	1
Air Flow Rate (nominal at 230V)	Heating	High	m³/min	90	90	90			
	Cooling	High	m³/min	96	100	97			
Fan	Discharge direction			Horizontal					
	Motor	Quantity		2	2	2	1	1	1
		Model		Brushless DC motor	Brushless DC motor	Brushless DC motor			
		Output	W				53	53	53
Motor	Speed (nominal)	Steps		8	8	8			
		Heating	rpm	760	760	760			
		Cooling	rpm	800	850	830			
Fan	Motor	Output	W	70	70	70			
		Drive		Direct drive	Direct drive	Direct drive			
Compressor	Quantity			1	1	1	1	1	1
	Motor	Model		JT100G-VD	JT100G-VD	JT100G-VD	2YC63BXD#C	2YC63BXD#C	2YC63BXD#C
		Type		Hermetically sealed scroll compressor	Hermetically sealed scroll compressor	Hermetically sealed scroll compressor	Hermetically sealed swing compressor	Hermetically sealed swing compressor	Hermetically sealed swing compressor
		Motor Output	W	2,200	2,200	2,200	1,920	1,920	1,920
		Starting Method		Inverter driven	Inverter driven	Inverter driven			
Motor	Crankcase Heater	Output	W	33	33	33			
Operation Range	Heating	Min	°CWB	-20	-20	-20	-20	-20	-20
		Max	°CWB	35	35	35	25	25	25
	Cooling	Min	°CDB	10	10	10	10	10	10
		Max	°CDB	46	46	46	43	43	43
	Sanitary water	Min	°CDB	-20	-20	-20	-20	-20	-20
		Max	°CDB	43	43	43	43	43	43
Sound Level (nominal)	Heating	Sound Power	dBA	64	64	66	61	61	62
		Sound Pressure	dBA	49	51	53	48	48	49
	Cooling	Sound Power	dBA	64	66	69	63	63	63
		Sound Pressure	dBA	50	52	54	48	48	50
Sound Level (Night quiet)	Heating	Sound Pressure	dBA	42	42	43			
	Cooling	Sound Pressure	dBA	45	45	46			

2 Specifications

2-2 TECHNICAL SPECIFICATIONS				ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
Refrigerant	Type			R-410A					
	Charge		kg	3.7	3.7	3.7	1.7	1.7	1.7
	Control			Expansion valve(electronic type)					
	Nr of Circuits			1	1	1	1	1	1
Refrigerant Oil	Type			Daphne FVC68D	Daphne FVC68D	Daphne FVC68D	FVC50K	FVC50K	FVC50K
	Charged Volume		l	1.0	1.0	1.0	0.75	0.75	0.75
Piping connections	Liquid (OD)	Quantity		1	1	1			
		Type		Flare connection					
		Diameter (OD)	mm	9,52	9,52	9,52	6,35	6,35	6,35
	Gas	Quantity		1	1	1			
		Type		Flare connection					
		Diameter (OD)	mm	15,9					
	Drain	Quantity		3	3	3	1	1	1
		Type		Hole	Hole	Hole	Socket	Socket	Socket
		Diameter (OD)	mm	26	26	26	18	18	18
	Piping Length	Minimum	m	5	5	5	3	3	3
		Maximum	m	75	75	75	30	30	30
		Equivalent	m	95	95	95			
		Chargeless	m	30	30	30			
	Additional Refrigerant Charge		kg/m	See installation manual outdoor unit 4PW37976-1B	See installation manual outdoor unit 4PW37976-1B	See installation manual outdoor unit 4PW37976-1B	0.02>10m	0.02>10m	0.02>10m
	Installation height difference	Maximum	m	30	30	30			
	Max. internunit level difference		m				20	20	20
	Heat Insulation			Both liquid and gas pipes	Both liquid and gas pipes	Both liquid and gas pipes			
Defrost Method				Pressure equalising	Pressure equalising	Pressure equalising	Reverse cycle	Reverse cycle	Reverse cycle
Defrost Control				Sensor for outdoor heat exchanger temperature					
Capacity Control Method				Inverter controlled					
Safety Devices				Fan motor thermal protector	Fan motor thermal protector	Fan motor thermal protector			
				Fuse	Fuse	Fuse			
				High pressure switch	High pressure switch	High pressure switch			

2 Specifications

2-2 TECHNICAL SPECIFICATIONS		ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
Standard Accessories	Item	Tie-wraps	Tie-wraps	Tie-wraps	Installation manual	Installation manual	Installation manual
	Quantity	2	2	2	1	1	1
	Item	Installation manual	Installation manual	Installation manual	Drain plug	Drain plug	Drain plug
	Quantity	1	1	1	1	1	1
Notes		The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.	The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.	The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.	See operation range drawing	See operation range drawing	See operation range drawing
		Down to 3m with recharging of the outdoor unit. Refer to the installation manual of the outdoor unit.	Down to 3m with recharging of the outdoor unit. Refer to the installation manual of the outdoor unit.	Down to 3m with recharging of the outdoor unit. Refer to the installation manual of the outdoor unit.	The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.	The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.	The sound pressure level is measured via a microphone at a certain distance from the unit. It is a relative value depending on the distance and acoustic environment. Refer to sound spectrum drawing for more information.

2-3 ELECTRICAL SPECIFICATIONS				ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
Power Supply	Name			V3					
	Phase			1~					
	Frequency		Hz	50	50	50	50	50	50
	Voltage		V	230	230	230	230	230	230
	Voltage range	Minimum	V	-10%					
		Maximum	V	+10%					

2 Specifications

2-3 ELECTRICAL SPECIFICATIONS				ERHQ011BAV3	ERHQ014BAV3	ERHQ016BAV3	ERHQ006BAV3	ERHQ007BAV3	ERHQ008BAV3
Current	Minimum Ssc value		kVa	Equipment complying with EN/IEC 61000-3-12: European/ International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16A and <=75A per phase	Equipment complying with EN/IEC 61000-3-12: European/ International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16A and <=75A per phase	Equipment complying with EN/IEC 61000-3-12: European/ International Technical Standard setting the limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16A and <=75A per phase	Equipment complying with EN/IEC 61000-S-12 (1)	Equipment complying with EN/IEC 61000-S-12 (1)	Equipment complying with EN/IEC 61000-S-12 (1)
	Starting current	Heating	A				11	11	11
		Cooling	A				11	11	11
	Maximum running Current	Heating	A				18	18	18
		Cooling	A	22.8	27.4	31.9	16.25	16.25	16.25
	Recomended fuses		A	32	32	32	20	20	20
Wiring connections	For Power Supply	Quantity					3	3	3
		Remark		See installation manual outdoor unit 4PW37976-1B	See installation manual outdoor unit 4PW37976-1B	See installation manual outdoor unit 4PW37976-1B			
	For connection with indoor	Quantity					4	4	4
		Remark		See installation manual outdoor unit 4PW37976-1B	See installation manual outdoor unit 4PW37976-1B	See installation manual outdoor unit 4PW37976-1B	Included earth wiring	Included earth wiring	Included earth wiring
Power Supply Intake				Outdoor unit only	Outdoor unit only	Outdoor unit only			
Notes							(1) European/ international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current > 16A smaller than or equal to 75A per phase.	(1) European/ international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current > 16A smaller than or equal to 75A per phase.	(1) European/ international technical standard setting the limits for harmonic currents produced by equipment connected to public low-voltage system with input current > 16A smaller than or equal to 75A per phase.

3 Capacity tables

3 - 3 Cooling/Heating capacity tables

COOLING

Model	Tamb (°C)	20		25		30		35		40		43	
	LWE (°C)	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI	CC	PI
006	7	6.01	1.56	5.73	1.75	5.43	1.95	5.12	2.16	4.80	2.39	4.59	2.53
	11	6.81	1.57	6.50	1.77	6.17	1.98	5.83	2.21	5.30	2.32	4.98	2.38
	13	7.23	1.57	6.90	1.78	6.56	2.00	6.20	2.23	5.56	2.28	5.18	2.30
	16	7.88	1.56	7.54	1.78	7.17	2.01	6.79	2.26	5.95	2.22	5.46	2.18
	20	8.80	1.55	8.42	1.79	8.03	2.03	7.63	2.29	6.48	2.13	5.82	1.99
007	7	7.15	2.05	6.84	2.28	6.50	2.52	6.13	2.77	5.35	2.68	4.89	2.59
	11	8.09	2.09	7.73	2.34	7.34	2.59	6.94	2.87	5.84	2.62	5.21	2.43
	13	8.57	2.11	8.20	2.36	7.79	2.63	7.36	2.91	6.09	2.59	5.36	2.34
	16	9.33	2.13	8.92	2.40	8.49	2.68	8.03	2.97	6.46	2.53	5.57	2.20
	20	10.4	2.16	9.9	2.44	9.48	2.73	8.99	3.04	6.96	2.44	5.82	1.99
008	7	8.24	2.43	7.90	2.68	7.52	2.94	7.10	3.23	5.68	2.86	4.87	2.59
	11	9.26	2.49	8.87	2.76	8.45	3.05	7.79	3.31	6.12	2.80	5.18	2.43
	13	9.79	2.52	9.38	2.80	8.93	3.10	8.14	3.36	6.34	2.77	5.33	2.35
	16	10.6	2.57	10.17	2.86	9.69	3.17	8.68	3.41	6.67	2.71	5.55	2.20
	20	11.7	2.63	11.3	2.94	10.75	3.26	9.39	3.48	7.09	2.61	5.80	1.99

HEATING (Peak values)

Model	LWC	30		35		40		45		50	
	Tamb	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI
006	-15	3.93	1.48	3.67	1.59	3.47	1.71	3.33	1.84	3.25	1.99
	-10	4.65	1.52	4.32	1.65	4.07	1.79	3.89	1.94	3.78	2.10
	-7	5.14	1.54	4.77	1.68	4.49	1.83	4.28	1.99	4.15	2.16
	-2	6.06	1.57	5.62	1.72	5.28	1.88	5.03	2.06	4.87	2.25
	2	6.89	1.57	6.38	1.74	6.00	1.91	5.72	2.11	5.53	2.31
	7	8.03	1.57	7.45	1.75	7.00	1.94	6.68	2.15	6.47	2.37
007	-15	4.87	1.82	4.62	1.94	4.43	2.08	4.30	2.23	4.24	2.40
	-10	5.67	1.88	5.34	2.02	5.09	2.18	4.92	2.36	4.82	2.55
	-7	6.21	1.91	5.83	2.07	5.55	2.24	5.35	2.42	5.23	2.63
	-2	7.23	1.95	6.77	2.13	6.42	2.32	6.17	2.52	6.02	2.75
	2	8.14	1.97	7.61	2.16	7.21	2.37	6.92	2.59	6.74	2.83
	7	9.40	1.98	8.79	2.19	8.32	2.42	7.98	2.66	7.78	2.92
008	-15	5.42	2.06	5.16	2.19	4.97	2.34	4.86	2.51	4.80	2.70
	-10	6.27	2.13	5.93	2.29	5.68	2.46	5.51	2.65	5.42	2.86
	-7	6.84	2.17	6.46	2.34	6.17	2.53	5.97	2.73	5.86	2.95
	-2	7.92	2.22	7.45	2.41	7.10	2.62	6.85	2.85	6.70	3.10
	2	8.9	2.26	8.35	2.46	7.93	2.69	7.65	2.93	7.47	3.20
	7	10.2	2.28	9.58	2.51	9.10	2.76	8.76	3.02	8.56	3.31

HEATING (integrated values*)

Model	LWC	30		35		40		45		50	
	Tamb	HC	PI	HC	PI	HC	PI	HC	PI	HC	PI
006	-15	3.50	1.40	3.27	1.51	3.09	1.62	2.97	1.75	2.89	1.89
	-10	4.14	1.45	3.85	1.56	3.62	1.70	3.46	1.84	3.36	2.00
	-7	4.52	1.45	4.20	1.58	3.95	1.72	3.77	1.87	3.65	2.03
	-2	5.27	1.46	4.89	1.60	4.59	1.75	4.38	1.92	4.24	2.10
	2	5.92	1.45	5.49	1.60	5.16	1.76	4.92	1.94	4.76	2.13
	7	8.03	1.57	7.45	1.75	7.00	1.94	6.68	2.15	6.47	2.37
007	-15	4.34	1.73	4.11	1.85	3.94	1.98	3.83	2.12	3.77	2.28
	-10	5.04	1.79	4.75	1.92	4.53	2.07	4.38	2.24	4.29	2.42
	-7	5.46	1.80	5.13	1.94	4.88	2.10	4.71	2.28	4.60	2.47
	-2	6.29	1.81	5.89	1.98	5.59	2.15	5.37	2.35	5.23	2.56
	2	7.00	1.81	6.55	1.99	6.20	2.18	5.96	2.38	5.80	2.61
	7	9.40	1.98	8.79	2.19	8.32	2.42	7.98	2.66	7.78	2.92
008	-15	4.82	1.96	4.59	2.08	4.43	2.23	4.32	2.39	4.27	2.56
	-10	5.58	2.03	5.28	2.17	5.06	2.34	4.91	2.52	4.82	2.72
	-7	6.02	2.04	5.69	2.20	5.43	2.37	5.26	2.57	5.15	2.78
	-2	6.89	2.07	6.48	2.25	6.17	2.44	5.96	2.65	5.83	2.88
	2	7.6	2.08	7.18	2.27	6.82	2.47	6.58	2.70	6.43	2.94
	7	10.2	2.28	9.58	2.51	9.10	2.76	8.76	3.02	8.56	3.31

* The integrated heating capacity and power input, is the average heating capacity and power input during 1 cycle. (from end of defrost till end of the next defrost).

3TW57782-1A

SYMBOLS

CC : Cooling capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 (kW)

HC : Heating capacity at maximum operating frequency, measured acc. Eurovent 6/C/003-2006 (kW)

PI : Power input (kW)

LWE : Leaving Water Evaporator temperature (°C)

LWC : Leaving Water Condensor temperature (°C)

Tamb : Ambient temperature (°C) RH=85%

NOTES

1 **Cooling capacity**
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range Dt = 3~8°C

2 **Heating capacity**
Capacity is according to Eurovent rating standard 6/C/003-2006 and valid for chilled water range Dt = 3~8°C

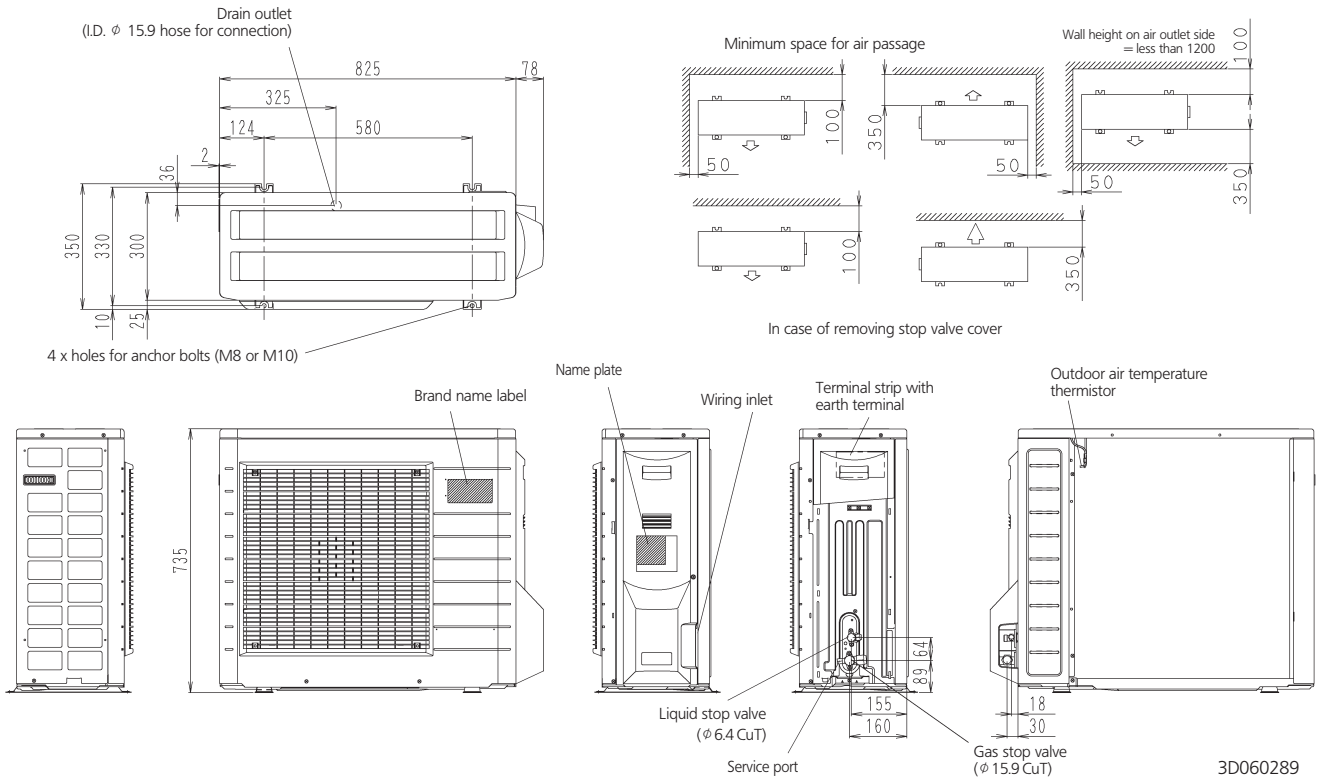
3 **Power input**
Power input is total of indoor and outdoor unit, except the circulation pump; according to Eurovent rating standard 6/C/003-2006.
Pump power input to be added = 60 W (according EN14511).
For the optional model with heatertape (V38) when ambient temperature becomes lower than 4°C: add power input of 60W

4 Dimensional drawing & centre of gravity

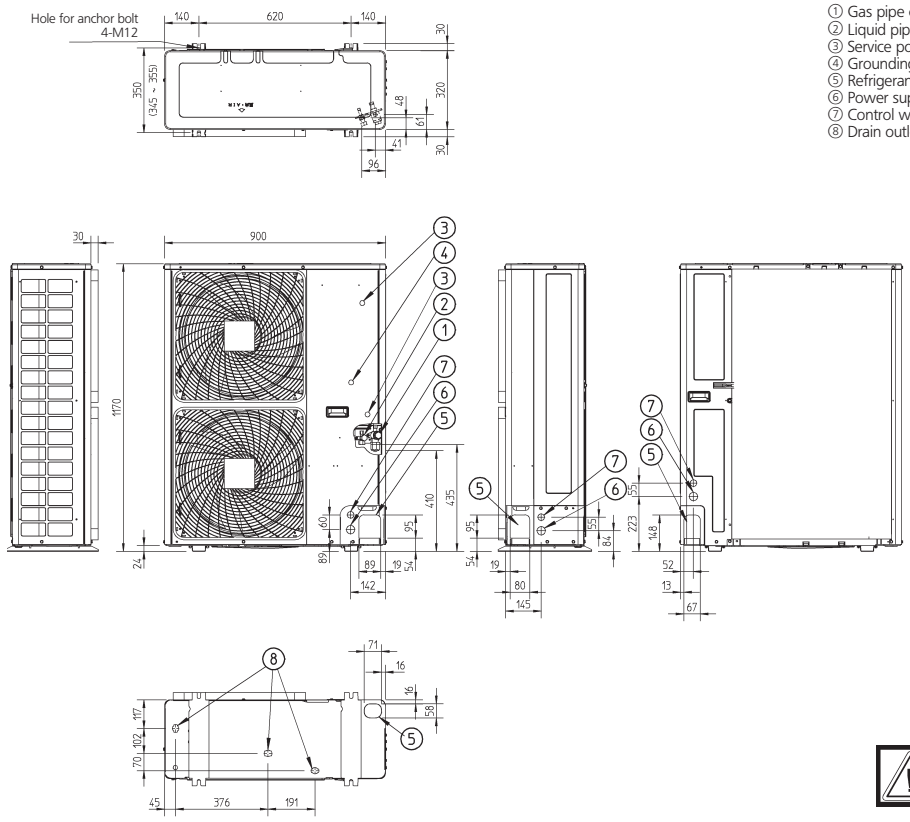
4 - 1 Dimensional drawing

unit (mm)

ERHQ006-008BV3



ERHQ011-016BV3



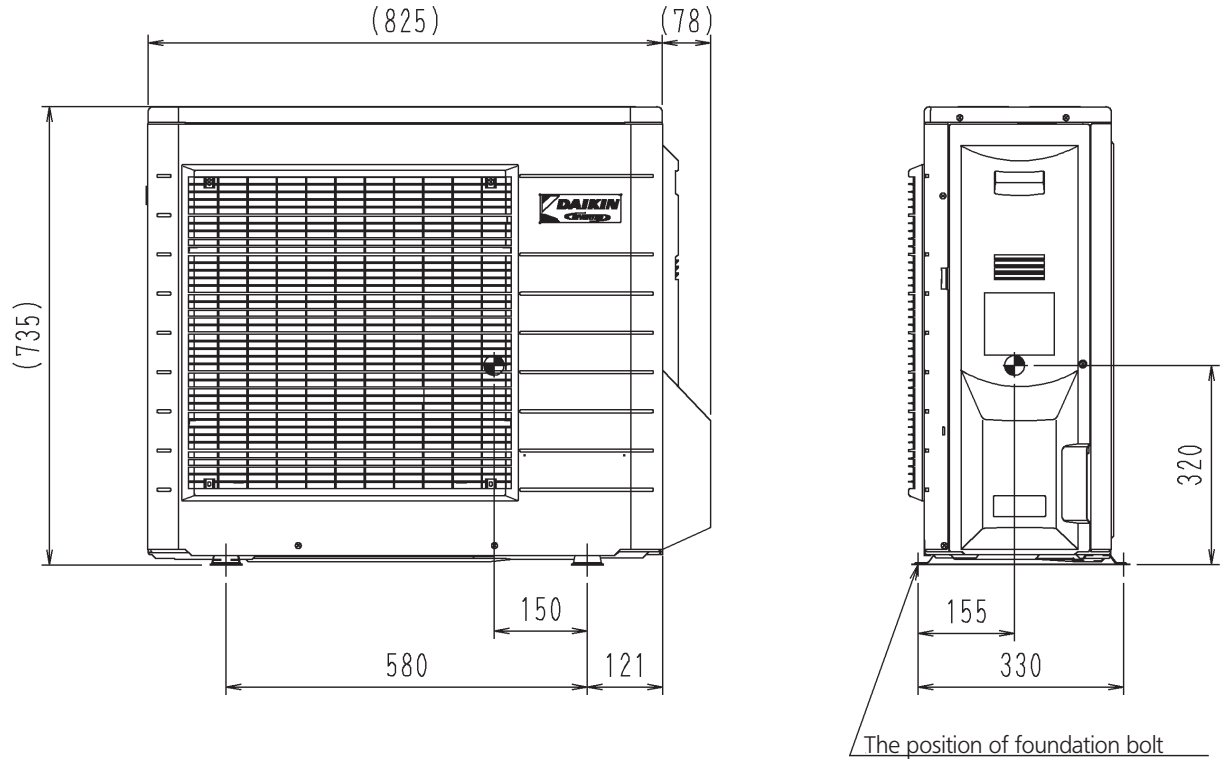
① Gas pipe connection ϕ 15.9 flare
② Liquid pipe connection - ϕ 9.5 flare
③ Service port (in the unit)
④ Grounding terminal M5 (in switch box)
⑤ Refrigerant piping intake
⑥ Power supply wiring intake (knock out hole ϕ 34)
⑦ Control wiring intake (Knock out hole ϕ 27)
⑧ Drain outlet

3TW57764-1

4 Dimensional drawing & centre of gravity

4 - 2 Centre of gravity

ERHQ006-008BV3



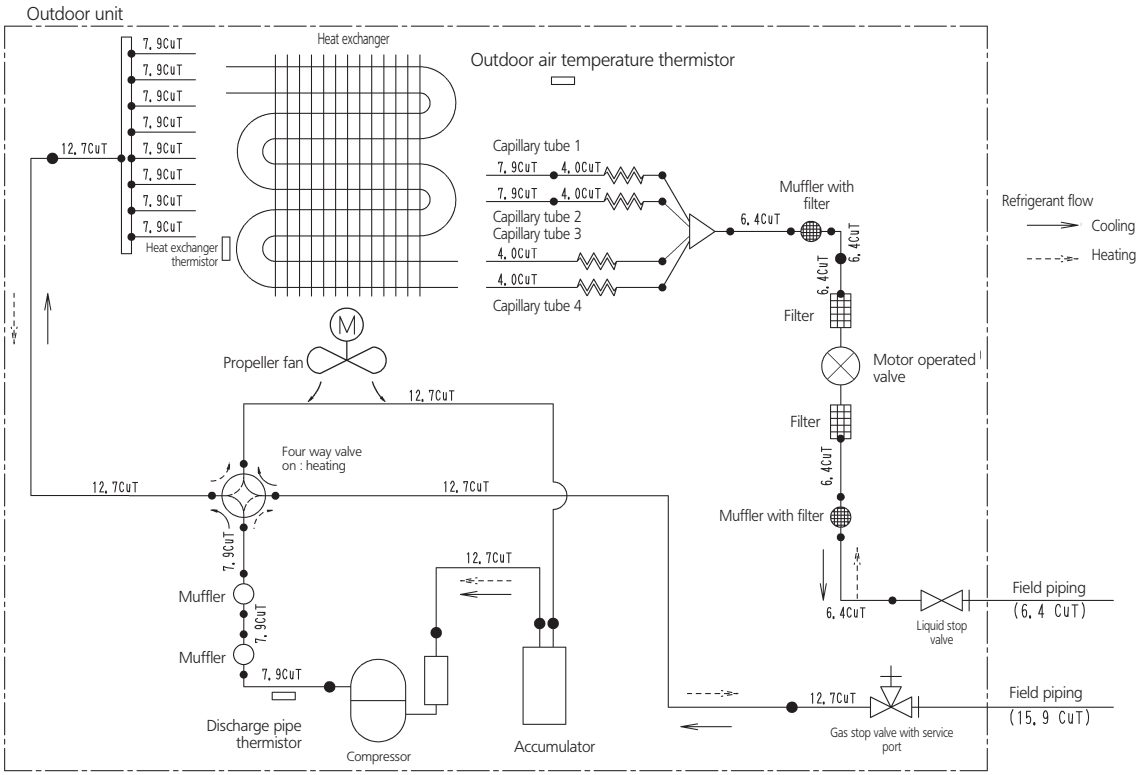
4D042258R

ERHQ011-016BV3

4TW29169-4A

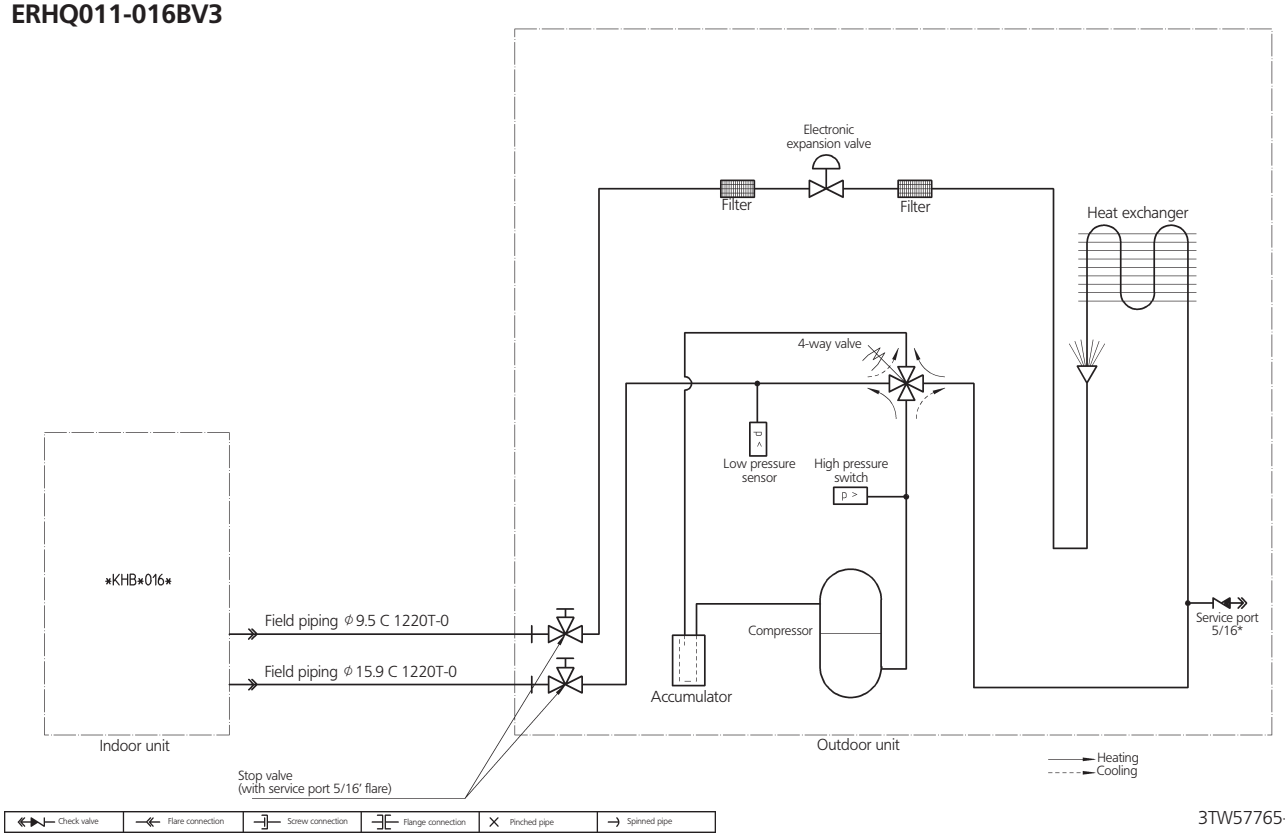
5 Piping diagram

ERHQ006-008BV3



3D052750H

ERHQ011-016BV3

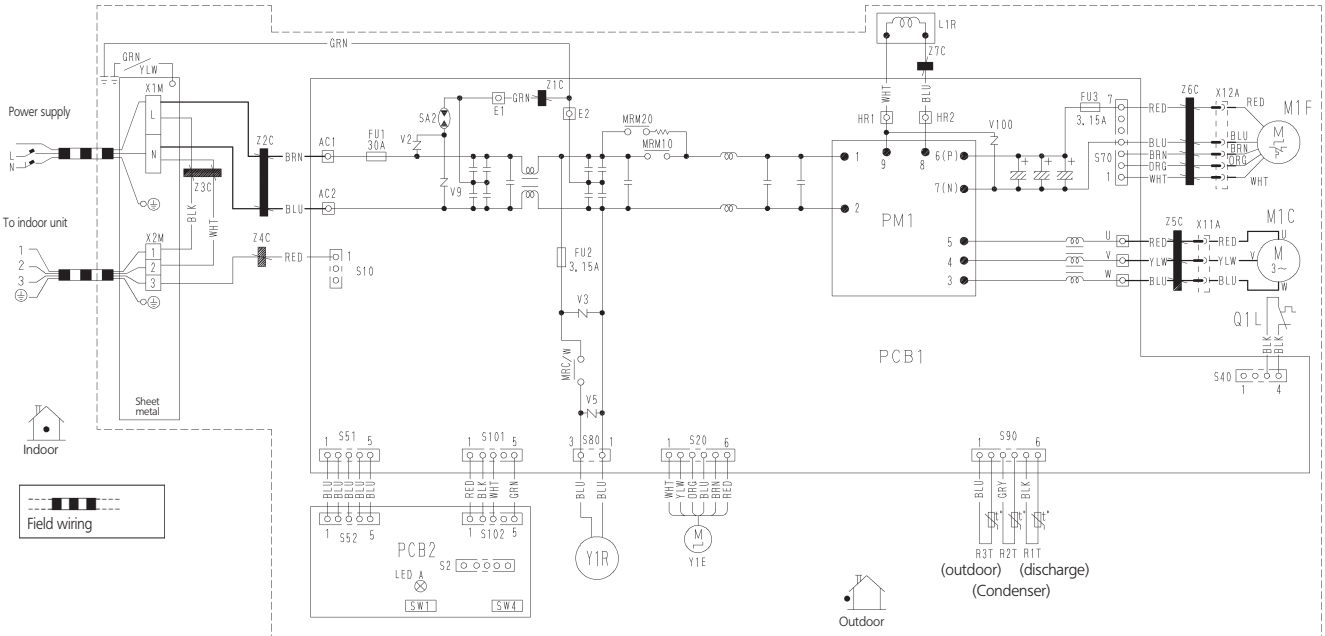


3TW57765-1A

6 Wiring diagram

6 - 1 Wiring diagram

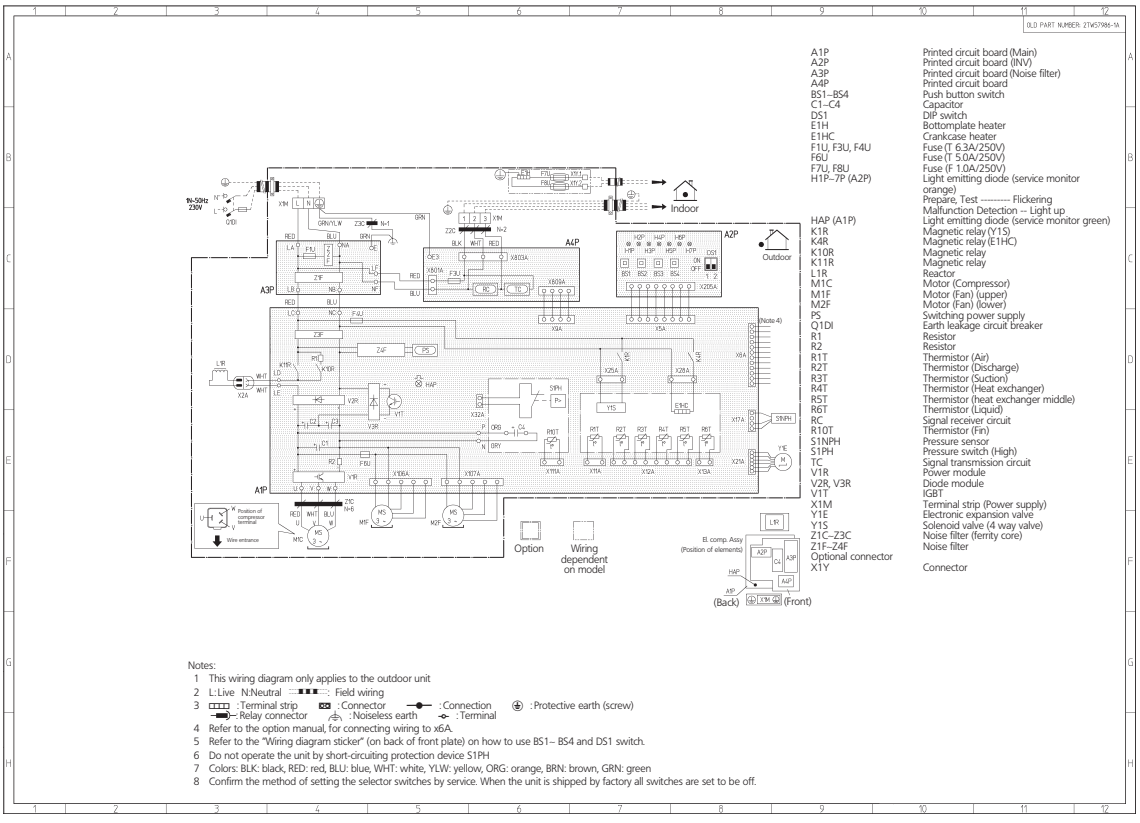
ERHQ006-008BV3



Z1C–Z7C	: Ferrite core	MRM10, MRM20		Q1L	: Overload protector
X1M, X2M	: Terminal strip	MRC/W	: Magnetic relay	PM1	: Power module
Y1E	: Electronic expansion valve coil	R1T–R3T	: Thermistor	PCB1,2	: Printed circuit board
V2, V3, V5, V9, V100	: Varistor	S2–S102	: Connector	Y1R	: Reversing solenoide valve coil
SA2	: Surge arrester	LEDA	: Pilot lamp	Sheet metal	: Terminal strip fixed plate
FU1, FU2, FU3:	: Fuse	L	: Live		
AC1, AC2		N	: Neutral		
U, V, W, X11A, X12A		SW1	: Forced operation on/off switch SW (SW1)		
E1, E2		SW4	: Local setting SW (SW4)		
HR1, HR2	: Connector	M1C	: Compressor motors		
		M1F	: Fan motor		
		L1R	: Reactor		

3D052296E

ERHQ011-016BV3



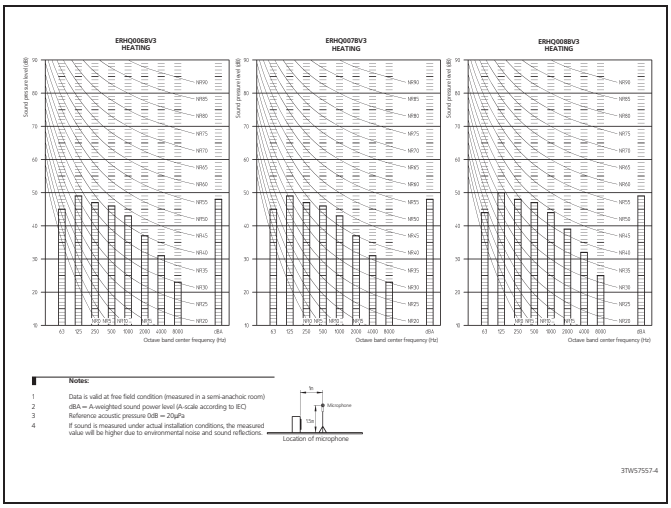
A1P	Printed circuit board (Main)
A2P	Printed circuit board (INV)
A3P	Printed circuit board (Noise filter)
A4P	Printed circuit board
BS1–BS4	Push button switch
C1–C4	Capacitor
DS1	DIP switch
E1H	Bottomplate heater
E1HC	Crankcase heater
F1U, F3U, F4U	Fuse (T 6.3A/250V)
F6U	Fuse (T 5.0A/250V)
F7U, F8U	Fuse (F 1.0A/250V)
H1P–7P (A2P)	Light emitting diode (service monitor orange)
	Prepare, Test --------- Flickering
	Malfunction Detection -- Light up
	Light emitting diode (service monitor green)
HAP (A1P)	Magnetic relay (Y1S)
K1R	Magnetic relay (E1HC)
K4R	Magnetic relay
K10R	Magnetic relay
K11R	Magnetic relay
L1R	Reactor
M1C	Motor (Compressor)
M1F	Motor (Fan) (upper)
M2F	Motor (Fan) (lower)
PS	Switching power supply
Q1DI	Earth leakage circuit breaker
R1	Resistor
R2	Resistor
R1T	Thermistor (Air)
R2T	Thermistor (Discharge)
R3T	Thermistor (Suction)
R4T	Thermistor (Heat exchanger)
R5T	Thermistor (heat exchanger middle)
R6T	Thermistor (Liquid)
RC	Signal receiver circuit
R10T	Thermistor (Fin)
S1NPH	Pressure sensor
S1PH	Pressure switch (High)
TC	Signal transmission circuit
V1R	Power module
V2R, V3R	Diode module
V1T	IGBT
X1M	Terminal strip (Power supply)
Y1E	Electronic expansion valve
Y1S	Solenoid valve (4 way valve)
Z1C–Z3C	Noise filter (ferrity core)
Z1F–Z4F	Noise filter
Optional connector	
X1Y	Connector

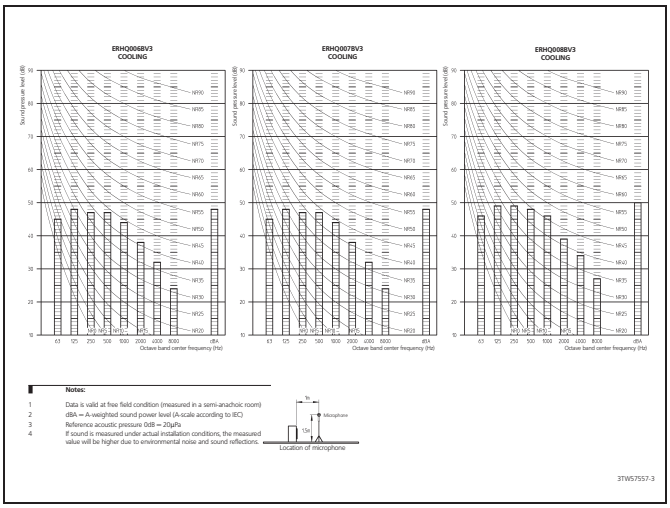
Notes:
1 This wiring diagram only applies to the outdoor unit
2 L: Live N: Neutral ▬▬: Field wiring
3 ▭: Terminal strip ⊠: Connector —●—: Connection ⏚: Protective earth (screw)
Relay connector ⏚: Noiseless earth —○—: Terminal
4 Refer to the option manual, for connecting wiring to x6A.
5 Refer to the "Wiring diagram sticker" (on back of front plate) on how to use BS1– BS4 and DS1 switch.
6 Do not operate the unit by short-circuiting protection device S1PH
7 Colors: BLK: black, RED: red, BLU: blue, WHT: white, YLW: yellow, ORG: orange, BRN: brown, GRN: green
8 Confirm the method of setting the selector switches by service. When the unit is shipped by factory all switches are set to be off.

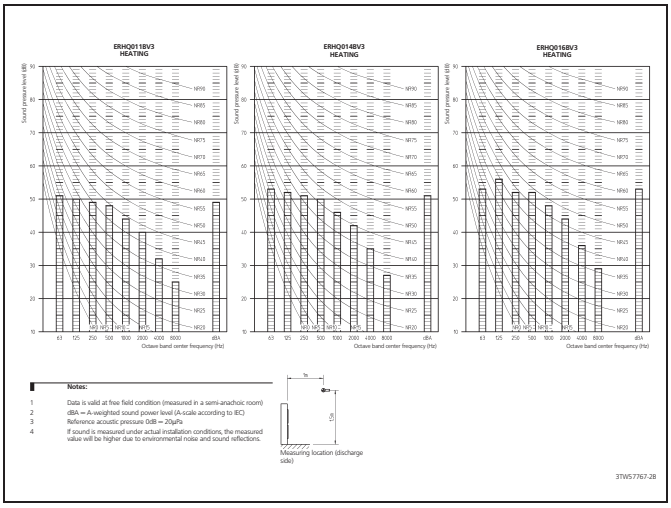
2TW59556-1A

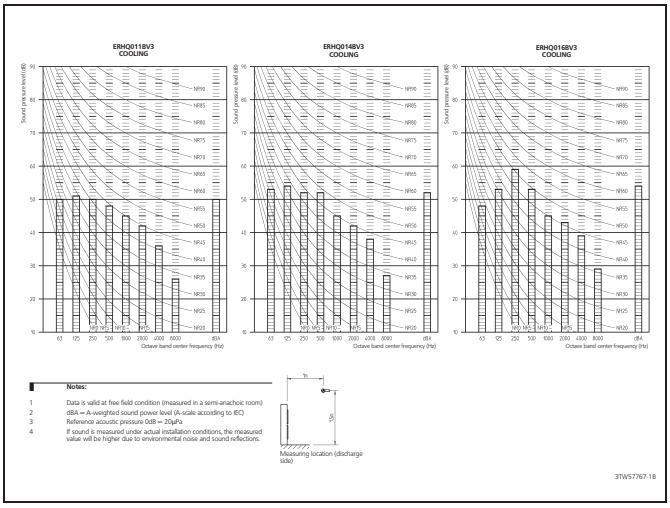
7 Sound data

7 - 1 Sound pressure spectrum


ERHQ006BV3
HEATING
ERHQ007BV3
HEATING
ERHQ008BV3
HEATING
Sound pressure level (dB)
Octave band center frequency (Hz)
Notes:
1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dBA — A-weighted sound power level (A-scale according to IEC)
3 Reference acoustic pressure 0dB — 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.
1m
Microphone
1.5m
Location of microphone
3TW57557-4

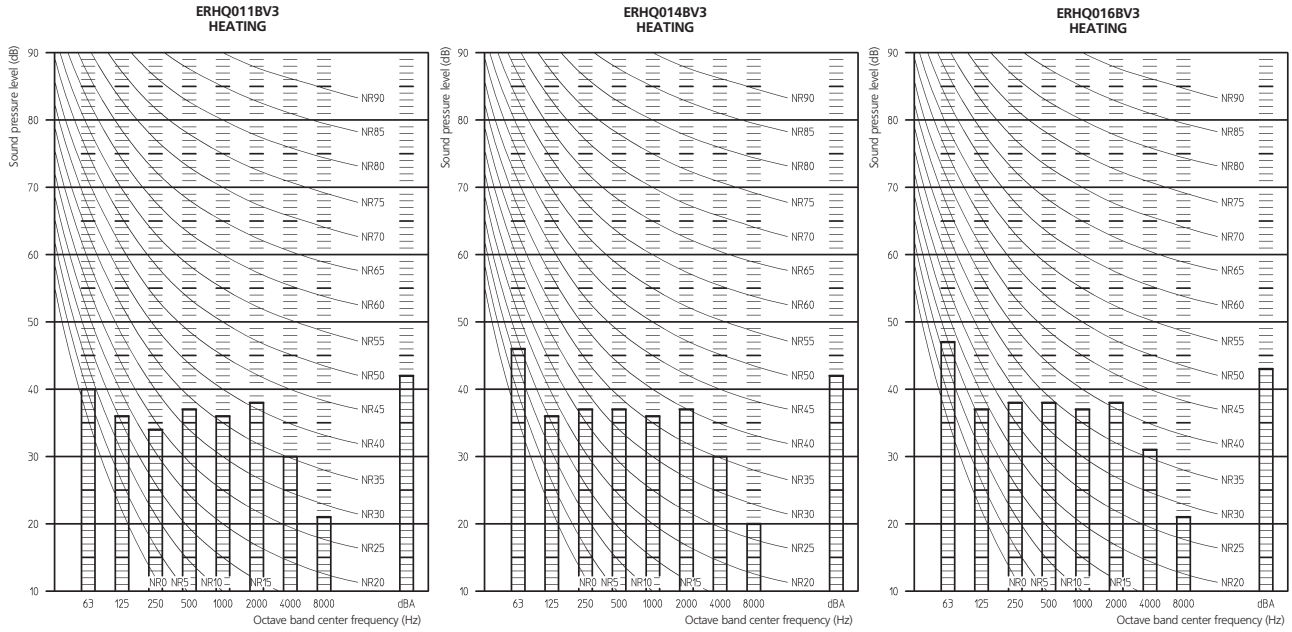

ERHQ006BV3
COOLING
ERHQ007BV3
COOLING
ERHQ008BV3
COOLING
Sound pressure level (dB)
Octave band center frequency (Hz)
Notes:
1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dBA — A-weighted sound power level (A-scale according to IEC)
3 Reference acoustic pressure 0dB — 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.
1m
Microphone
1.5m
Location of microphone
3TW57557-3


ERHQ011BV3
HEATING
ERHQ014BV3
HEATING
ERHQ016BV3
HEATING
Sound pressure level (dB)
Octave band center frequency (Hz)
Notes:
1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dBA — A-weighted sound power level (A-scale according to IEC)
3 Reference acoustic pressure 0dB — 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.
1m
1.5m
Measuring location (discharge side)
3TW57767-2B


ERHQ011BV3
COOLING
ERHQ014BV3
COOLING
ERHQ016BV3
COOLING
Sound pressure level (dB)
Octave band center frequency (Hz)
Notes:
1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dBA — A-weighted sound power level (A-scale according to IEC)
3 Reference acoustic pressure 0dB — 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.
1m
1.5m
Measuring location (discharge side)
3TW57767-1B

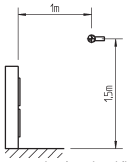
7 Sound data

7 - 2 Sound pressure spectrum quiet mode



Notes:

1 Data is valid at free field condition (measured in a semi-anachoic room)
2 dBA = A-weighted sound power level (A-scale according to IEC)
3 Reference acoustic pressure 0dB = 20µPa
4 If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.

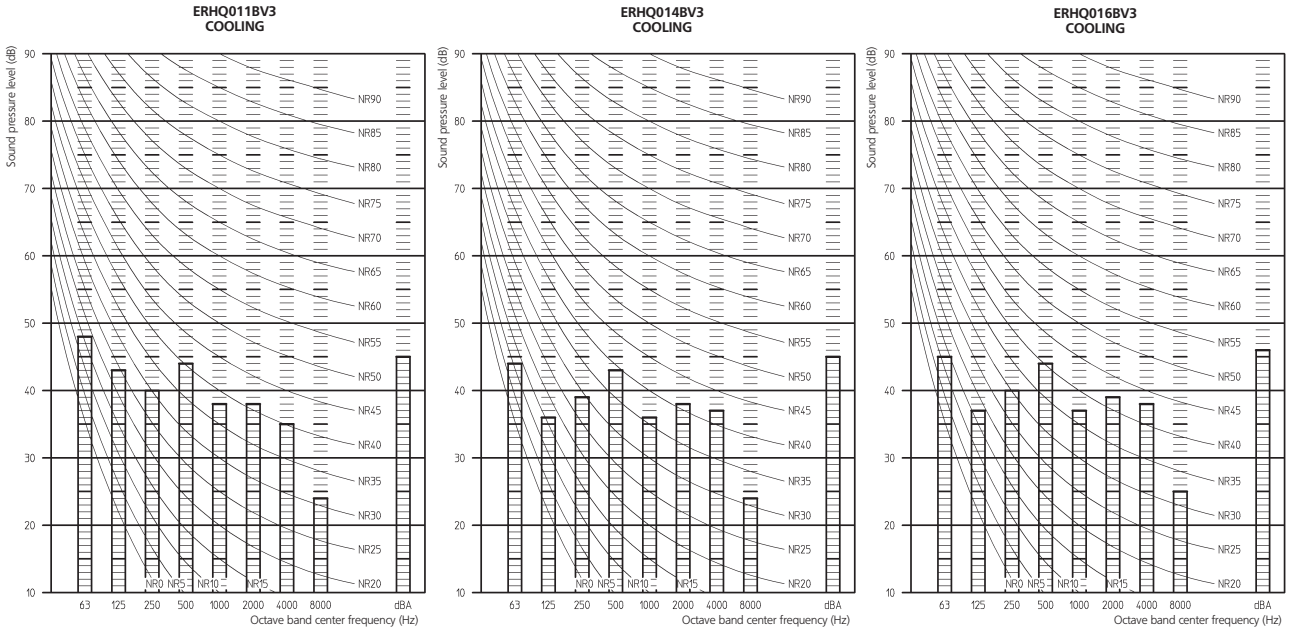


Measuring location (discharge side)

3TW57767-4A

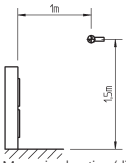
7 Sound data

7 - 2 Sound pressure spectrum quiet mode



Notes:

1. Data is valid at free field condition (measured in a semi-anachoic room)
2. dBA = A-weighted sound power level (A-scale according to IEC)
3. Reference acoustic pressure 0dB = 20µPa
4. If sound is measured under actual installation conditions, the measured value will be higher due to environmental noise and sound reflections.



Measuring location (discharge side)

3TW57767-3A

8 Installation

8 - 1 Installation method

ERHQ-BV3

Outdoor unit

Installation guidelines / precautions Daikin Altherma

Installation location (General)
- The equipment is not intended for use in a potentially explosive atmosphere.
- The equipment is not intended for use in a potentially explosive atmosphere.
- Choose a place solid enough to bear the weight and vibration of the unit, where the operation noise will not be amplified.
- Choose a location where the hot/cold air discharger from the unit or the operation noise will not cause a nuisance to the neighbours of the user.
- Avoid places near a bedroom and the like, so that the operation noise will cause no trouble.
- There must be sufficient space for carrying the unit into and out of the site.
- There must be sufficient space for air passage and no obstructions around the air inlet and the air outlet.
- The site must be free from the possibility of flammable gas leakage in a nearby place.
- Locate the unit so that the noise and the discharged hot/cold air will not annoy the neighbours.
- Install units, power cords and inter-unit cables at least 3 m away from television and radio sets. This is to prevent interference to images and sounds.
- Depending on radio wave conditions, electromagnetic interference may still occur even if installed more than 3 m away.
- In coastal areas or other places with salty atmosphere of sulfate gas, corrosion may shorten the life of the outdoor unit.
- Since drain flows out of the outdoor unit, do not place anything under the unit wicht must be kept away from moisture.

Installation location (in cold climates)
- To precent exposure to wind, install the outdoor unit with its suction side facing the wall.
- Never install the outdoor unit at a site where the suction side may be exposed directly to wind.
- To prevent exposure to wind, install a baffle plate on the air discharge side of the outdoor unit.
- Unit shoud be installed in a way that a minimum of 10 cm free space is assured below the unit's bottom plate at all conditions, e.g.: heavy snowfall (if necessary construct a pedestal).
- In heavy snowfall areas it is very important to select an installation site where the snow ill not affect the unit. If lateral snowfall is possible, make sure that the heat exchanger coil is not affected by the snow (if necessary construct a lateral canopy). (See figure)

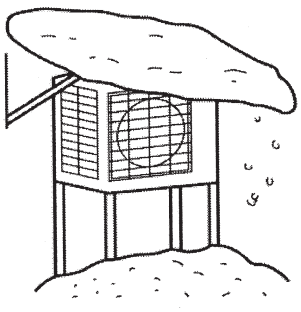


Figure 1: construction of canopy and pedestal

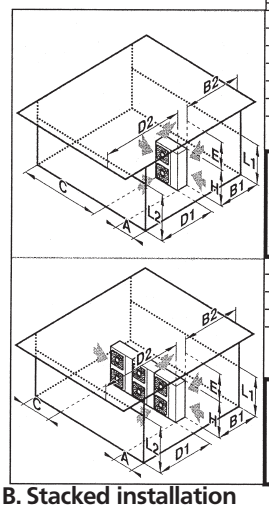
4TW57919-7

8 Installation

8 - 1 Installation method

ERHQ011-016BV3

A. Non stacked installation



↙	↗	↘	↖	↓			A	B1	B2	C	D1	D2	E	L1/L2	
✓								≥100							
✓		✓	✓				≥100	≥100		≥100					
✓				✓				≥100				≤500	≥1000		
✓		✓	✓	✓			≥150	≥150		≥150		≤500	≥1000		
	✓										≥500				
	✓			✓					≤500		≥500		≥1000		
✓	✓				L1<L2			≥100			≥500				
					L2<L1			≥100			≥500				
✓	✓			✓	L1<L2	L1≤H		≥250	≤500		≥750		≥1000	0<L1≤1/2H	
											≥1000			0<L1≤1/2H	
						H<L1					L1≤H				1
					L2<L1	L2≤H		≥100			≥1000	≥500	≥1000	0<L2≤1/2H	
								≥200						1/2H<L2≤H	
						H<L2					L2≤H				
✓		✓	✓				≥200	≥300		≥1000					
✓		✓	✓	✓			≥200	≥300		≥1000		≤500	≥1000		
	✓			✓					≤500		≥1000		≥1000		
✓	✓				L1<L2			≥300			≥1000				
					L2<L1			≥250			≥1500			0<L2≤1/2H	
								≥300						1/2H<L2≤H	
✓	✓			✓	L1<L2	L1≤H		≥300	≤500		≥1000		≥1000	0<L1≤1/2H	
											≥1250			1/2H<L1≤H	1
						H<L1					L1≤H				
					L2<L1	L2≤H		≥250			≥1500	≤500	≥1000	0<L2≤1/2H	
								≥300						1/2H<L2≤H	2
						H<L2					L2≤H				

Legend unit (mm)

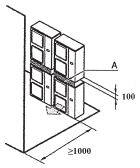
- ↙ Suction side obstacle
- ↗ Discharge side obstacle
- ↘ Left side obstacle
- ↖ Right side obstacle
- ↓ Top side obstacle
- ✓ Obstacle is present
- This situation is not allowed.

1 In these cases, close the bottom of the installation frame to prevent discharged air from being bypassed.

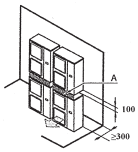
2 In these cases, only 2 units can be installed.

B. Stacked installation

1. Obstacles exist in front of the outlet side



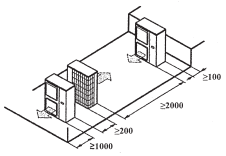
2. Obstacles exist in front of the air inlet



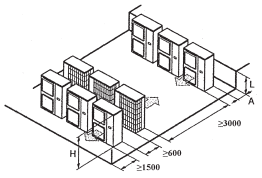
Do not stack more than one unit.
About 100mm is required as the dimension for laying the upper outdoor unit's drain pipe.
Get the portion A sealed so that air from the outlet does not bypass.

C. Multiple-row installation

1. Installation of one unit per row



2. Installing multiple units (2 units or more) in lateral connection per row

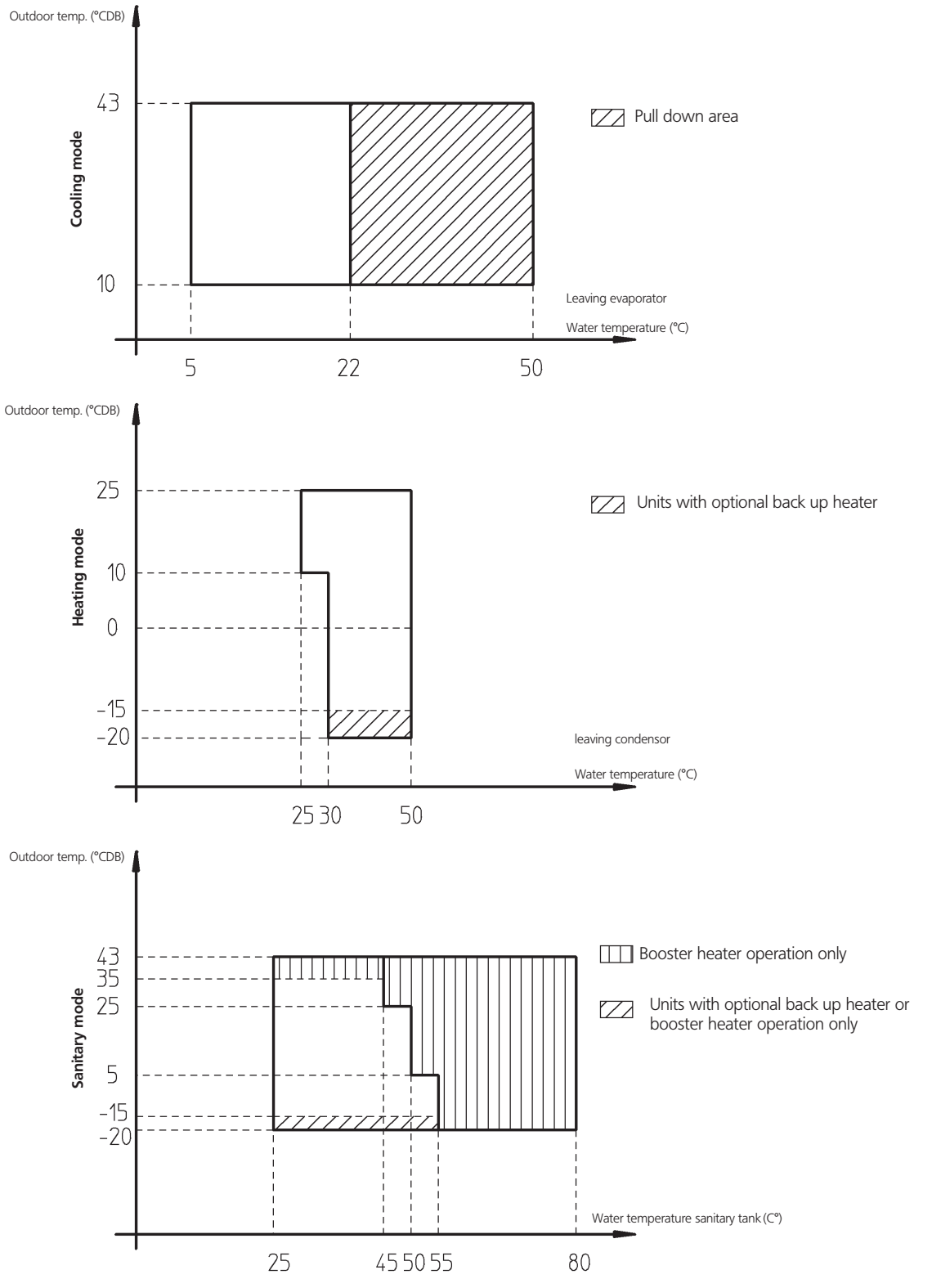


Relation of dimensions of H, A, and L are shown in the table below.

	L	A
L ≤ H	0 < L ≤ 1/2 H	250
	1/2 H < L	300
H < L	Installation not allowed	

3TW26739-4

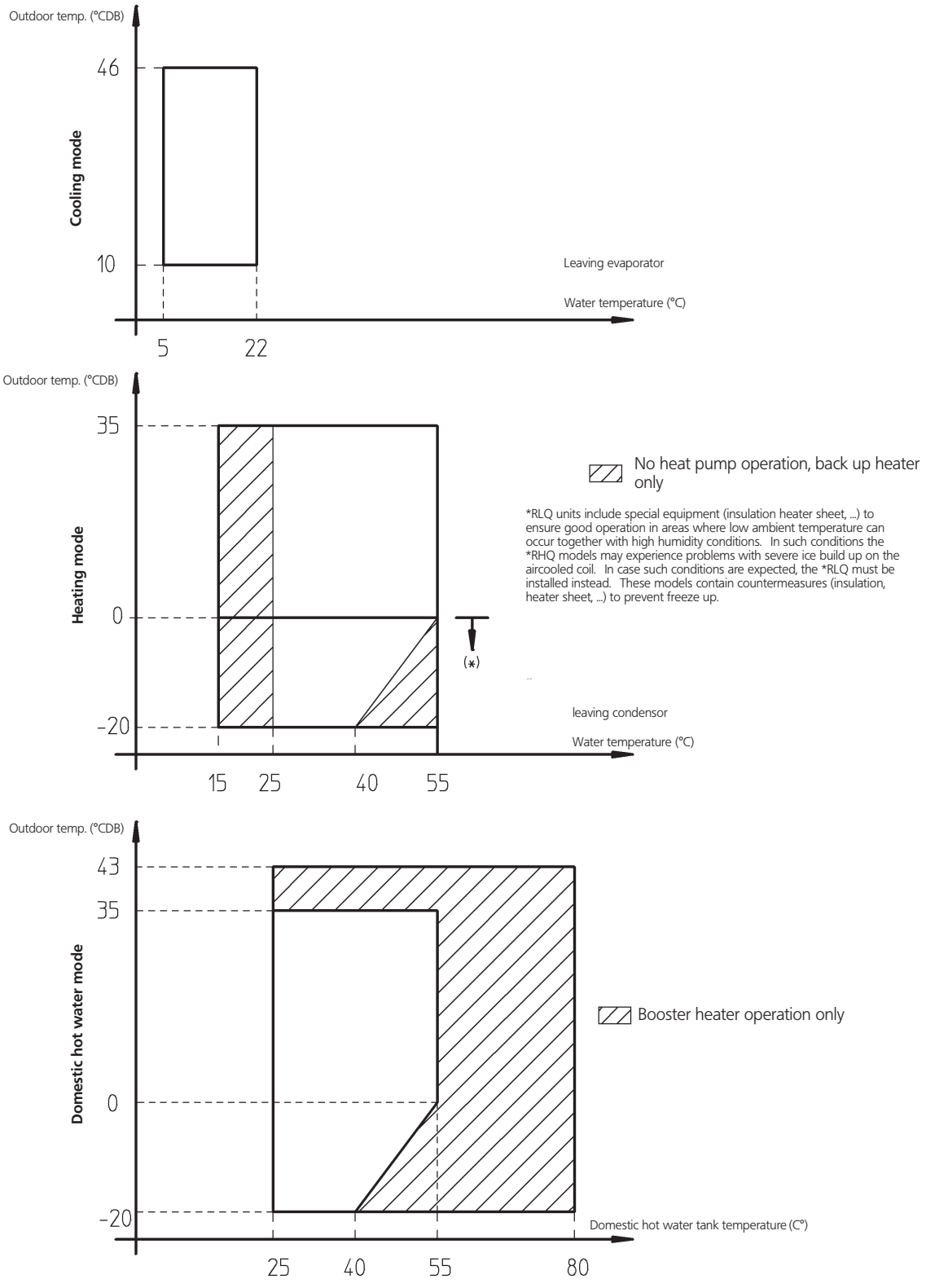
9 Operation range



4TW57783-1

9 Operation range

ERHQ011-016BV3



4TW57753-1C